

# AgWRAP WELL SITE EVALUATION

## IRRIGATION DESIGN PARAMETERS TABLE

The values in this table should only be used to ESTIMATE Well Flow Rate and Peak Water Use for a NCACSP water supply well and pump. The values in this table should not be used to create detailed irrigation designs. The actual water use of an irrigation system may vary based on other parameters including region, soil type, irrigation equipment and application frequency. Peak water use values are derived from the NC Irrigation Guide<sup>1</sup>. The values were calculated assuming 75% efficiency for the irrigation system.

CROP	Peak Water Use <sup>1</sup> (in/day)
Alfalfa	0.32
Annual and perennial flowers	0.19
Cotton	0.27
Corn, field	0.29
Gladioli	0.19
Ladino clover and grass,	0.32
Summer perennials or Mixed Hay	0.32
Improved Pasture or mixed hay	0.29
Nursery Crops, 1st year	0.21
Nursery Crops, 2nd year	0.24
Peanuts	0.24
Peas, field	0.24
Irish Potatoes	0.27
Small Grain or Soybeans	0.24
Tobacco	0.24

CROP	Peak Water Use <sup>1</sup> (in/day)
Vineyards, cultivated	0.24
Vegetables, Group 1	0.19
Vegetables, Group 2	0.19
Vegetables, Group 3	0.24
Vegetables, Group 4	0.24
Orchards (bare)	0.27
Orchards (Cover)	0.32

1. [https://efotg.sc.egov.usda.gov/references/public/NC/NC\\_Irrigation\\_Guide\\_Apr\\_2010.pdf](https://efotg.sc.egov.usda.gov/references/public/NC/NC_Irrigation_Guide_Apr_2010.pdf)

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**Group 1** - Kale, Lettuce, Mustard, Onions, Spinach, Strawberries

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**Group 2** - Beans (snap), Beets, Broccoli, Cabbage, Cauliflower, Carrots,  
Collard, Peas (garden), Peppers, Turnips, Rutabagas

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**Group 3** - Beans (lima), Cucumbers, Tomatoes

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**Group 4** - Asparagus, Cantaloupes, Corn (sweet), Eggplant, Okra,  
Watermelon

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# WELL SITE EVALUATION

## LIVESTOCK WATERING PARAMETERS TABLE

The values in this table should only be used to ESTIMATE Well Flow Rate and TOTAL Water Use for a NC CSP water supply well and pump. The Water Use values should not be used to create detailed livestock watering designs. The actual livestock water use may vary based on other parameters.

ANIMAL TYPE	Water Use <sup>1,2,3</sup> (gal/head/day)
Beef cattle	15
Beef cow	20
Beef cow/calf pair	30
Goats	2
Horses	8
Milking cow	35
Milking cow/calf pair	45
Dry cow	15
Sheep and lambs	2
Nursery pigs (up to 60 lbs BW)	0.7
Grower Pigs (60-100 lbs BW)	2 - 3
Finishing Pigs (100-250 lbs BW)	3 - 5
Nonpregnant gilts	3
Pregnant sows	3 - 6
Lactating sows	2.5 - 7
Boars	5
	<b>(gal/1,000 birds/day)</b>
Broilers	70 - 85

1. <https://content.ces.ncsu.edu/water-needs-assessment-tool-a-guide-for-technical-specialists>
2. [https://projects.ncsu.edu/project/swine\\_extension/healthyhogs/book1995/almond.htm](https://projects.ncsu.edu/project/swine_extension/healthyhogs/book1995/almond.htm)
3. 2013 J. Appl. Poult. Res. 22 :934–941 <http://dx.doi.org/10.3382/japr.2013-00767>